



## New Data Presented at the American Epilepsy Society Annual Meeting Demonstrate Unprecedented Efficacy Outcomes with the NeuroPace RNS System

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### *Real-world experience with the RNS System reveals best outcomes to date of any neuromodulation device for focal seizures*

**MOUNTAIN VIEW, Calif. — December 9, 2019**— NeuroPace, Inc. today announced that new data from a multicenter, real-world clinical study of the RNS System has demonstrated outcomes not previously seen with other neuromodulation therapies for focal epilepsy. Data from this study and more than 30 abstracts related to the RNS System were presented at the American Epilepsy Society (AES) 2019 Annual Meeting in Baltimore this week.

Results from the multicenter, retrospective study of 150 patients showed that patients receiving the RNS System experienced 67% median seizure frequency reduction at 1 year and 75% median seizure frequency reduction at 2 years. A subset of patients showed an especially impressive response: more than 1 in 3 patients achieved >90% seizure reduction and nearly 1 in 5 reported no seizures in the preceding 3 months. Overall, physicians assessed 75% of the study patients to be “much improved” or “very much improved” in their functioning. <sup>1</sup>

“We are encouraged to see that therapeutic outcomes with the RNS System in the real world are even better than those reported in the clinical trials supporting FDA approval. Seizure reductions of 67% and 75% within one and two years of treatment in the real world are equivalent to outcomes achieved at six and nine years in the prior clinical trials,” said Martha Morrell, MD, CMO of NeuroPace. “These results suggest that overall efficacy of the RNS System is accelerating, as our extensive clinical experience has been used to inform and optimize programming strategies. However, more opportunity exists. By combining the RNS System’s unique ability to capture and respond to continuous intracranial EEG data with artificial intelligence, we will potentially be able to rapidly titrate therapy for each individual patient based on their unique neural biomarkers.”

In addition to therapeutic benefits, the RNS System is the only epilepsy therapy that empowers clinicians with long-term intracranial EEG data. Other scientific posters at AES revealed how researchers are using this groundbreaking, objective neural data to better treat and manage refractory focal epilepsy.

Highlighted presentations included:

- Results from *Multidien Chronotypes in Human Focal Epilepsy*, presented by Marc Grau Leguia, University of Bern, Switzerland, showed that ECoG recordings captured by the RNS System revealed a high prevalence of multi-day rhythms of interictal epileptiform activity, extending their previous work to a larger cohort, and suggest that seizure risk estimation using these potential biomarkers may have broad applicability.
- *Changes in Detections Captured by RNS System during Initiation of Cannabidiol* was presented by Janet Greenwood, PA-C, Keck USC School of Medicine. Data from the case series highlighted the potential utility of long-term iEEG data from the RNS System as an objective tool for clinicians to assess response to cannabidiol (CBD) during titration to clinical therapeutic dose.
- Another case series, *Awareness of Seizures: Patient Report and RNS Record*, by Asfi Rafiuddin of George Washington University Hospital, compared objective electrophysiological recordings from the RNS System to patient reported seizures. Self-reported seizures may be inaccurate for various reasons, and objective data captured by the RNS System may be helpful in identifying seizure type and frequency.

### **About the RNS<sup>®</sup> System**

The RNS System is the world’s first and only closed-loop brain-responsive neurostimulation system designed to prevent epileptic seizures at their source. As a type of brain-computer interface, the RNS System treats seizures by continuously monitoring brain waves, recognizing each patient’s unique “seizure onset fingerprint,” and automatically responding with imperceptible electrical pulses before seizures occur. The RNS System is composed of a neurostimulator, leads that are placed at the seizure foci, a remote monitor used by patients to upload their data, and a RNS Tablet and Patient Data Management System (PDMS) used by physicians. Physicians can view their patient’s electrographic data on a secure website and program the device to personalize therapy for each individual. Unlike anti-epileptic drugs or resective surgery, brain-responsive neuromodulation outcomes typically improve with time and do not cause the cognitive side effects that can be associated with those alternatives. The RNS System is now available at nearly all comprehensive epilepsy centers in the United States and is widely covered by private and government insurance.

The RNS<sup>®</sup> System is an adjunctive therapy for adults with refractory, focal onset seizures with no more than 2 epileptogenic foci. See important safety information at [www.neuropace.com/safety/](http://www.neuropace.com/safety/).

### **About NeuroPace**

NeuroPace is the global leader in the emerging field of brain-computer interface technologies, which is projected to become a \$1.2 billion market by 2024. We are dedicated to developing groundbreaking technology and advancing brain science to improve the quality of life for millions of individuals who suffer from neurological disorders. The company’s first product, the RNS System, is the only FDA-approved brain-responsive neurostimulator for the treatment of focal onset refractory epilepsy. In addition to treating epilepsy, brain-responsive neuromodulation holds the promise of treating other brain disorders that impact quality of life for millions of patients throughout the world.

<sup>1</sup>Lin, et. al. Real-world experience with brain-responsive neurostimulation for focal onset seizures. Poster, AES 2019 (Abst. 1.216)